OZAROWSKI, Aleksander; KULUZYNSKI, Henryk

Studies on Asarum Europaeum L. I. Pharmacodynamic studies on oil and products of Asarum europaeum L. Polski tygod. lek. 9 no.32: 1003-1005 9 Aug 54.

1. Z Zakladu Farmakologii Akademii Medycznej w Lublinie, kierownik doc. dr Aleksander Ozarowski i ze Szpitala Powiatowego im. W.J. Strazewicza w Niemodlinie, dyrektor Henryk Kuluzynski.
(PLANTS,
Asarum europaeum, pharmacol.)

KULUZYNSKI, Henryk; OZAROWSKI, Aleksander

Studies on Asarum europaeum L. II. Clinical and therapeutic studies on Asarum europaeum L. as expectorant. Polski tygod. lek. 9 no.35:1101-1105 30 Aug 54.

1. Ze Szpitala Powiatowego im. W.J.Strazewicza w Niemodlinie; dyrektor: Dr Henryk Kuluzynski i z Zakladu Farmakognozji Akademii Medycznej w Lublinie; kierownik: doc dr Aleksander Ozarowski.

(EXPECTORANTS,
asarum europaeum)
(PLANTS,
Asarum europaeum as expectorant)

USSR/Human and Animal Morphology. Nervous System. Peri- S-3
pheral Nervous System

Abs Jour: Ref Zhur - Biol., No 19, 1958, 88419

Author : Bulygin, I. A.; Zorina-Tsikina, K.F.; Kul'ivanovskiy, N. P.

Inst : AS Belorussian SSR

Title : Experimental Analysis of the Indirect Afferent Pathways of the Pelvic Organs.

Orig Pub: Dokl. AN SSSR 1957, 1, No. 3, 126-129

Abstract: In acute experiments on dogs, besides the well-known direct afferent pathways of the pelvic organs, 3 indirect afferent pathways were demonstrated, passing extrapyramidally into the anterior segments of the C.N.S. It was demonstrated that from the urinary bladder and rectum only direct afferent pathways reach the C.N.S. through the pelvic nerves, but also

Card 1/2

45

USSR/Human and Animal Morphology. Nervous System. Peri- S-3
pheral Nervous System

Abs Jour: Ref Zhur - Biol., No 19, 1958, 88419

Abstract: indirect and roundabout pathways through the inferior splanchnic nerves exist. The afferent fibers of these reach the spinal cord in the thoracic and cervical segment. The roundabout afferent pathways of the pelvic organs contain not only cerebro-spinal fibers, but also sympathetic afferent fibres-originating from Dogiel's cells - type 2.

Card 2/2

ZORINA-TSIKINA, K.F.; KUL'VANOVSKIY, M.P.

Interoceptive reflex influences from the bladder in young dogs. Trudy Inst. fiziol. AN BSSR 2:203-208 '58. (MIRA 12:1)

1. Laboratoriya kortiko-vistseral'noy fiziologii Instituta fiziologii AN BSSR.
(BLADDER--INNERVATION) (BLOOD PRESSURE)
(SPINAL CORD)

YUN'YEV, G.S.; KUL'VANOVSKIY, M.P.; SHCHANNIKOVA, Z.D.

Interoceptive reflex influences from the bladder on cardiac activity in dogs (according to electrocardiographic data). Trudy Inst. fiziol. AN BSSR 2:209-219 '58. (MIRA 12:1)

1. Laboratoriya kortiko-vistseral'noy fiziologii Instituta fiziologii AN BSSR.
(BLADDER--INNERVATION) (ELECTROCARDIOGRAPHY)

KUL'VANOVSKIY, M.P.

Interoceptive reflex influences from the bladder on respiration and blood pressure following the transection of pelvic and hypogastric nerves. Trudy Inst. fiziol. AN BSSR 2:220-228 '58. (MIRA 12:1)

1. Laboratoriya kortiko-vistseral'noy fiziologii Instituta fiziologii AN BSSR.
(BLADDER--INNERVATION) (RESPIRATION)
(BLOOD PRESSURE)

KUL'VANOVSKIY, M. P. Cand Biol Sci -- (diss) "Afferent paths of interoceptive reflexes from the rectum." Minsk, 1959. 24 pp with charts (Acad Sci Belorussian SSR. Inst of Biology), 150 copies (KL, 52-59, 118)

BULYGIN, I.A.; ZORINA-TSIKINA, K.F.; KUL'IVANOVSKIY, M.P.

Analysis of collateral afferent pathways of interoceptive reflexes from pelvic organs [with summary on English]. Fiziol.zhur. no.1: 7-15 Ja '59. (MIRA 12:2)

1. From the Institute of Physiology, BSSR Academy of Sciences, Minsk.
(PELVIS, physiol.
collateral afferent pathways of interoceptive reflexes from pelvic organs (Rus))
(REFLEX,
same))

KUL'VANOVSKIY, M.P. [Kul'vanouski, M.P.]

Intersceptive reflexes from the rectum following transection of the spinal cord and some vegetative nerves. Vestsi AN BSSR. Ser. biial. nav. no.1:80-88 '59. (MIRA 12:7)
(RECTUM--INNERVATION) (SPINAL CORD)
(NERVOUS SYSTEM, AUTONOMIC)

ZORINA-TSIKINA, K.P.; KUL'VANOVSKIY, M.P.

Interoceptive reflexes from the bladder following transsection of the spinal cord and different autnomic formations. Trudy Inst.fiziol. AN BSSR 3:178-189 '59. (MIRA 13:7)

1. Laboratoriya kortiko-visteeral'noy fiziologii Instituta fiziologii AN BSSR.
(BLADDER--INNERVATION) (NERVOUS SYSTEM) (REFLEXES)

KUL'VANOVSKIY, M.P.

Role of various autnonomic formations in the afferent innervation of the rectum. Trudy Instlfiziol. AN BSSR 3:199-204 '59. (MIRA 13:7)

1. Laboratoriya kortiko-vistseral'noy fiziologii Instituta fiziologii AN BSSR.

(RECTUM--INNERVATION) (NERVOUS SYSTEM, AUTONOMIC)

BULYGIN, I.A.; KUL'VANOVSKIY, M.P.

Now preparation for studying peripheral viscero-visceral reflexes. Dokl.AN BSSR 3 no.12:510-511 D '59.
(MIRA 13:4)

(REFLEXES)

BULYGIN, I.A.; BELORYBKINA, L.I.; KUL'VANOVSKIY, M.P.

True sympathetic reflexes. Fiziol.zhur. 47 no.3:285-292 Mr '61.
(MIRA 14:5)

1. From the Institute of Physiology of the B.S.S.R. Academy of Sciences and Medical Institute, Minsk.
(NERVOUS SYSTEM, SYMPATHETIC) (REFLEXES)

BULYGIN, I.A.; KUL'VANOVSKIY, M.P.

Abdominal organ specimen for the study of peripheral visceral reflexes. Fiziol. zhur. 47 no.6:780-782 Je '61. (MIRA 15:1)

1. From the Laboratory of Cortico-Visceral Physiology B.S.S.R. Institute of Physiology, Minsk.
(REFLEXES) (LABORATORY ANIMALS)

BULYGIN, I.A.; BALAKHNINA, E.I.; KUL'VANOVSKIY, M.P.

Ganglionic mediation and its role in forming viscero-visceral reflexes. Fiziol. zhur. 47 no.9:1096-1104 S '61. (MIRA 14:9)

1. From the Institute of Physiology, B.S.S.R. Academy of Sciences, Minsk.

(REFLEXES)

KUL'VANOVSKIY, S.B.

Polish geography textbook for the 5th class of the secondary school ("Knowledge of geography; class 5"[in Polish]. M.Czekanska, H.Radlicz-Ruhlowa. Reviewed by S.Kul'vanovskii. Geog. v shkole 18 no.3:75-77 My-Je '55. (MIRA 8:9)
(Poland--Geography--Textbooks) (Czekanska,M.) (Radlicz--Ruhlowa,H)

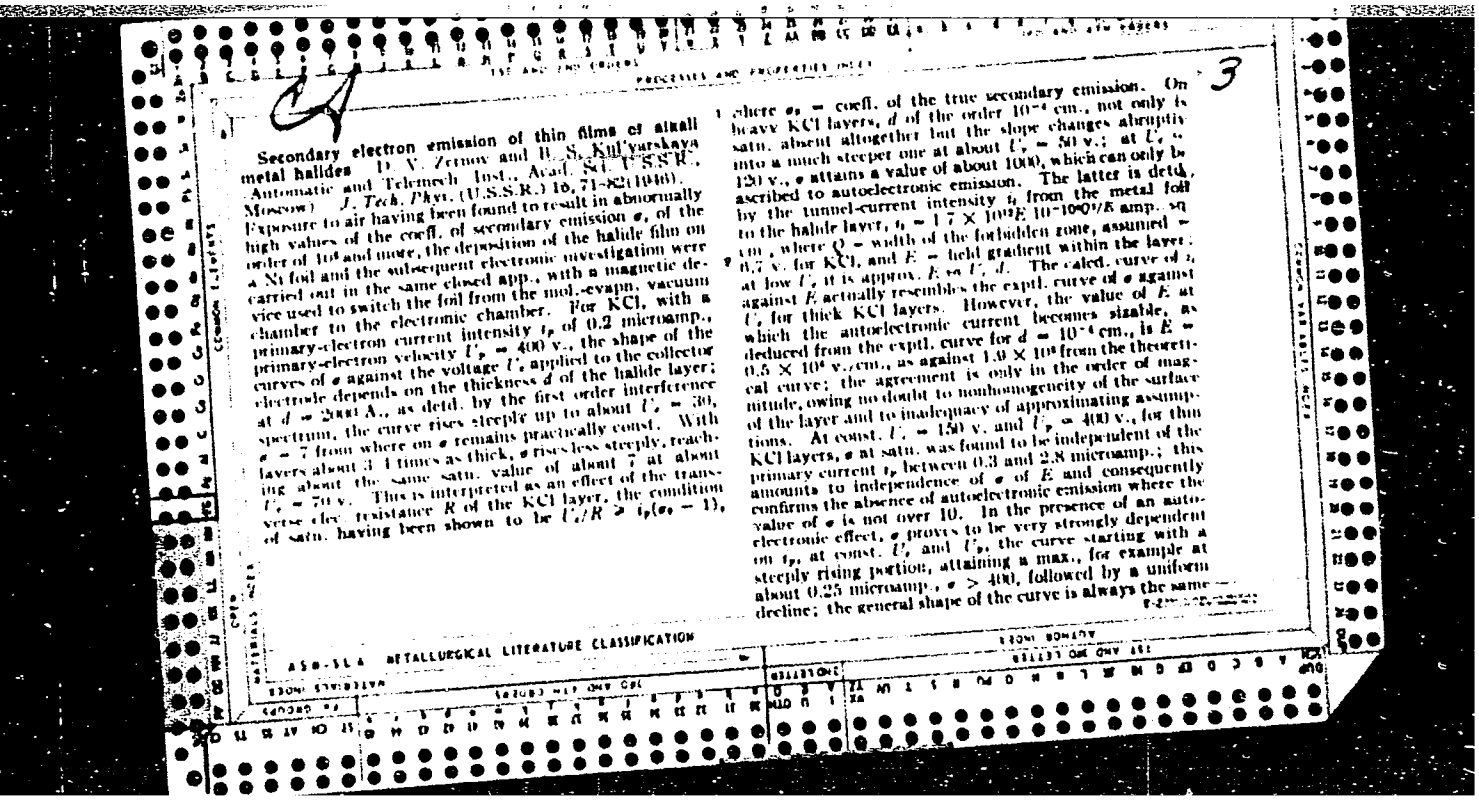
KUL'VANOVSKIY, S.B.

Climate of the Gorkiy area in climatograms. Uch.zap.GGPI 20:188-265 '58. (MIRA 13:6)
(Gorkiy—Climate)

KHARITONYCHEV, A.T.; KUL'VANOVSKIY, S.B., dotsent, red.

[Role of man in landscape changes of the right-bank area of Gorkiy Province] Rol' khoziaistvennoi deiatel'nosti cheloveka v izmenenii landshaftov Gor'kovskogo pravoberezh'ia. Gor'kii, Gor'kovskii gos.pedagog.in-t im. A.M.Gor'kogo, 1960. 149 p. (MIRA 14:2)

(Gorkiy Province--Physical geography)



Secondary electron emission of thin films of alkali metal halides D. V. Zernov and B. S. Kul'yarskaya (Automatic and Telemech. Inst., Acad. Sci. U.S.S.R., Moscow). *J. Tech. Phys.* (U.S.S.R.) 10, 71–82 (1940). Exposure to air having been found to result in abnormally high values of the coeff. of secondary emission σ, of the order of 10 and more, the deposition of the halide film on a Ni foil and the subsequent electronic investigation were carried out in the same closed app., with a magnetic device used to switch the foil from the mol.-evapn. vacuum chamber to the electronic chamber. For KCl, with a primary-electron current intensity i_p of 0.2 microamp., primary-electron velocity U_p = 400 v., the shape of the curves of σ against the voltage U_1 applied to the collector electrode depends on the thickness d of the halide layer; at d = 2000 A., as detd. by the first order interference spectrum, the curve rises steeply up to about U_1 = 30, σ = 7 from where on σ remains practically const. With layers about 3–4 times as thick, σ rises less steeply, reaching about the same satn. value of about 7 at about U_1 = 70 v. This is interpreted as an effect of the transverse elec. resistance R of the KCl layer, the condition of satn. having been shown to be $U_1/R > i_p(\sigma_0 - 1)$, where σ_0 = coeff. of the true secondary emission. On heavy KCl layers, d of the order 10^{-4} cm., not only is satn. absent altogether but the slope changes abruptly into a much steeper one at about U_1 = 50 v.; at U_1 = 120 v., σ attains a value of about 1000, which can only be ascribed to autoelectronic emission. The latter is detd. by the tunnel-current intensity i_t from the metal foil to the halide layer, $i_t = 1.7 \times 10^{9} E^{2} 10^{-10\Phi^{3/2}/E}$ amp., Φ = 0.7 v. for KCl, and E = field gradient within the layer; at low U_1 it is approx. $E = U_1/d$. The calcd. curve of i_t against E actually resembles the exptl. curve of σ against U_1 for thick KCl layers. However, the value of E at which the autoelectronic current becomes sizable, as deduced from the exptl. curve for $d = 10^{-4}$ cm., is $E = 0.5 \times 10^{6}$ v./cm., as against 1.0×10^{6} from the theoretical curve; the agreement is only in the order of magnitude, owing no doubt to nonhomogeneity of the surface of the layer and to inadequacy of approximating assumptions. At const. U_1 = 150 v. and U_p = 400 v., for thin KCl layers, σ at satn. was found to be independent of the primary current i_p between 0.3 and 2.8 microamp.; this amounts to independence of σ of E and consequently confirms the absence of autoelectronic emission where the value of σ is not over 10. In the presence of an autoelectronic effect, σ proves to be very strongly dependent on i_p, at const. U_1 and U_p, the curve starting with a steeply rising portion, attaining a max., for example at about 0.25 microamp., σ > 400, followed by a uniform decline; the general shape of the curve is always the same —

A58-51A METALLURGICAL LITERATURE CLASSIFICATION

even though the numerical values at the max. may vary according to the specimen. In the absence of autoelectronic emission, plots of σ against the voltage (velocity) U_p of the primary electrons, at const. $i_p = 0.2$ microamp. and $U_s = 180$ v., consist of a rising branch leveling off in satn. at about $U_p = 600$–800 v., with σ not over 10, while in the case of thick layers in which autoelectronic emission is prevalent the curve has a max. at about U_p 200 v., the values of σ being of the order 100–600. The sharp fall of σ beyond the max. is ascribed to elec. cond. induced in the KCl by the fast primary electrons and the resulting lowering of inner field strength, which checks the autoelectronic emission. In analogy with the Al_2O_3-Cs_2O emitters, KCl also shows time-lag phenomena in both the establishment and the damping of the secondary emission current. On a primary impulse of 0.05 sec. 0.2 microamp., the secondary current does attain its full amplitude and is damped completely within a few hundredths of a sec.; with shorter primary impulses, secondary emission does not attain its full stationary value and its oscillographic record shows symmetrical rise and fall of the current. Time-lag phenomena are present whenever autoelectronic emission predominates.

N. Thon

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

3

Energy distribution of secondary electrons emitted by thin dielectric films. D. V. Zernov and B. S. Kul'var-skaya (Acad. Sci. U.S.S.R., Moscow). *J. Tech. Phys.* (U.S.S.R.) **16**, 771-82(1946).—The arrangement usual for electron emission by metals does not give correct re-sults for emission by dielec. films because of the potential drop within these films. The energy distribution of elec-trons emitted by a KCl film on Ni was measured in a tube the inner wall of which was coated with a conducting film kept at 150-200 v. In the presence of this accelerating electrode the charges of the collector electrode do not af-fect the potential gradient and the current within the di-electric. A KCl film about 2 μ thick has a curve i against U similar to that of uncoated Ni but shifted by several v. i is the secondary-current strength, and U is the potential of the collector electrode. When the KCl film is about 8 μ thick, i increases with U in 2 stages; this shows that the secondary electrons are of 2 kinds: (1) usual secondary electrons, and (2) electrons which are extd. from the metal subphase by the elec. field and cross the dielec. film without a considerable loss of energy. The U at which di/dU for the electrons of the 2nd kind passes through a max. is near the Fermi level of the metal subphase. When the KCl film is thicker still, the autoelectronic emission (i.e. that of the 2nd kind) is so much more intensive than the normal second-ary emission that the latter cannot be detected on the i-U curves. The coeff. of secondary emission (including both kinds) reaches 200 at these thicknesses. The high energy of the "autoelectrons" is discussed. J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KUL'VARSKAIA, B. S.

Investigation of the Effect of Temperature on the Electronic Emission of Dielectric Films Under the Influence of the Field of a Positive Surface Charge. (In Russian.) D. V. Zernov and B. S. Kul'varskaia. Journal of Technical Physics (U.S.S.R.), v. 17, no. 3, 1947, p. 308-318.

Describes experiments indicating that the electronic emissivity of dielectric films is strongly influenced by temperature. A maximum is indicated for the range 10° to 30°C. From 10°C. to the temperature of liquid air, the electronic emissivity of the above films drops to a zero value. A similar drop occurs upon increasing the temperature from 30° to 80°C.

KUL'VARSKAYA, B. S.

KUL'VARSKAYA, B. S.: "Investigation of secondary electron emission from alloy emitters". Moscow, 1955. Inst of Radio Engineering and Electronics, Acad Sci USSR. (Dissertations for the degree of Candidate of Technical Science.)

SO: Knizhnaya Letopis' No. 50 10 December 1955. Moscow.

KUL'VARSKAYA, B.S.; VAYNSHTEYN, B.K.

Electronographic study of the structure of silver-magnesium and copper-magnesium alloys. Trudy Inst.krist.no.11:97-100 '55.
(MLRA 9:6)
(Silver-magnesium alloys) (Copper-magnesium alloys)

KUL'VARSKAYA, B. S.

USSR/Electronics - Electronic and Ionic Emission H-2

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 12290

Author : Kul'varshaya, B.S.
Inst :
Title : Secondary Electron Emission from Alloys.

Orig Pub : Radiotekhn. i elektronika, 1956, 1, No 4, 512-524

Abstract : Report of the results of an experimental investigation of the secondary electron emission from various alloy emitters with a copper and nickel base. The investigated alloys (CuMg, CuBe, NiBe, NiZr, NiTi, Ni, Ba, and NiMg) were activated by the method of dosed oxidation, i.e., according to the pressure drop of the oxygen in this system. For each alloy, a determination was made of the optimum amount of absorbed oxygen per square centimeter required to insure the maximum value of the coefficient of secondary emission σ. The activation processes of the alloys differed in their temperature modes,

Card 1/3

USSR/Electronics - Electronic and Ionic Emission H-2

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 12290

and the limits of the activation temperatures rose from magnesium alloys (approximately 300 -- 400°) to beryllium alloys, and then to alloys NiTi and NiZr (900°). An investigation of the temperature-stability of alloyed emitters has shown that the lowest temperature (500 -- 550) is withstood by magnesium alloys with a 3% content of magnesium, followed by copper-beryllium alloys, which withstand prolonged heating at a temperature of approximately 750°, nickel-beryllium, and nickel-magnesium, which are suitable for 900 -- 1000°, and then nickel-zirconium -- for 1000° and above. Deep oxidation of the majority of alloys causes the appearance of the "Molter" emission with anomalously high values of σ (up to 280 for NiBe). An investigation of the endurance of the emitters to the action of air has shown that the most stable, as compared with magnesium alloys, are beryllium alloyed emitters. Several recommendations are made concerning the use of various alloys in

Card 2/3

KUL'VARSKAYA, B. S.

"Secondary Electron Emission From Nickel Base Alloys," by B. S. Kul'varskaya, Institute of Radio Engineering and Electronics, Academy of Sciences, USSR, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 20, No 9, Sep 56, pp 1029-1027

Basic requirements to the separate components of nickel based alloys (NiBe, NiZr, NiTi, NiBa, NiMg) were studied from the standpoint of securing the stability and resistance to air and temperature of the emitters. The most resistant to the action of air proved to be beryllium alloys. The stability of efficient emitters of alloys was rising while passing from magnesium emitters (AgMg and CuMg) to NiBe and further to NiTi and NiZr. Because of their strong resistance to heat and the tested nickel based alloys (NiBe, etc.) may be used as cathode materials for low power magnetrons, whose cathodes have to stand during operation temperatures over 1,000°C.

Sum 1258

PA - 2602.

AUTHOR: KUL'VARSKAYA,B.S., YASNOPOL'ASKAYA,A.A.

TITLE: Inter-Departmental Seminar on Cathode Electronics. (Mezhduvedomstvennyy seminar po katodnoy elektronika, Russian).

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol 2, Nr 3, pp 357 - 358 (U.S.S.R.)

Received: 5 / 1957 Reviewed: 6 / 1957

ABSTRACT: On January 7 th 1957 four lectures were delivered. V.A.Simonov spoke about "Thermoemission with impulse glowing". During the passage of current impulses of great density ($10^5 \div 10^7$ A/cm^2) through metal wire, high currents occurred between the wire and the adjoining electrodes.According to the authors' opinion, they are due to the discharge along the wire. By means of a mass spectrometer, hydrogen-ions, oxygen-, carbon-, and nitrogen ions were recorded during these proceedings. The phenomena are explained by the impulse desorption of the gas andby those processes which are due to the expansion of rapidly forming ion - electron plasmata. Thus, Lebedev's and Khaykin's theory of the existence of an anomalous thermo-electron emission and the occurrance of deviations from Langmure's law during the impulse glowing of metal wires has become untenable. N.I. Malyshev reported about: "State and tendency of the investigations on the elaboration of L-cathodes." The cathode has the following data: 4 W power consumption, 1000° C working temperature, the current density at this temperature amounts to 6 - 7 A/cm^2 (with

Card 1/2

impulse operation), operation time 5000 hours at 1000° C, evaporation velocity of barium - 8.10^{-4} μ/100 hours.

A.V.Morozov spoke about "The technology of the production of tungsten barium cathodes". The three types differ in form and in the manner in which the single parts are connected. Operating time more than 100 hours. Current densities up to 5 A/cm^2.

B.N.Popov spoke about "Thorium oxyde cathodes and their application in electric vacuum appliances." Metal-ceramic cathodes were developed which can be used in the magnetron of the centimeter range. The main advantage is their moderate sparking.

ASSOCIATION: Not given.
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.

Card 2/2

KULVARSKAYA, B.S.

109-4-20/20

AUTHOR: Kul'varskaya, B.S., Yasnopol'skaya, A.A. and Alpatova, N.M.

TITLE: Interdepartmental Seminar on Cathode Electronics. (Mezhduvedomstvennyy seminar po katodnoy elektronike)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol.2, No.4, pp. 511 - 512 (USSR).

ABSTRACT: The seminar took place on February 4-5, 1957, in the Institute of Radio-engineering and Electronics of the Soviet Academy of Sciences and was devoted to the problem of cataphoretic coating of oxide cathodes and anaphoretic coating of heaters. The following papers were read, of which short summaries are given:
Lavrov, I.S. "Electrophoretic processes in organic media."
Berger, A.Yu. "New developments in the technology of the cataphoretic coating of cathodes with carbonates."
Parkhomenko, V.S. "Mechanisation and automation of the cataphoretic coating of cathodes with carbonates."
Vostrov, G.A. "Emissive and other properties of cataphoretically-coated oxide cathodes."
Bashuk, R.P. "Electrophoretic coating of heaters with aluminium oxide."
Gandelsman, I.L. "Production technology of the anophoretic coating of heaters."

Card 1/2

KUL'VARSKAYA, B.S.

109-8-17/17

AUTHORS: Kul'varskaya, B.S., Trigubenko, V.A., and Maslovskaya, R.S.

TITLE: Inter-Departmental Seminar on Cathode Electronics. (News) (Mezhduvedomstvennyy Seminar Po Katodnoy Elektronike - Khronika)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol.II, Nr 8, pp.1086-1088 (USSR)

ABSTRACT: A meeting of the Inter-Departmental Seminar on Cathode Electronics took place on May 6, 1957, in the Institute of Radio Engineering and Electronics of the Soviet Academy of Sciences, at which six papers were read. These dealt primarily with the thermal emission and the technology of preparation of thermionic cathodes. The papers were as follows: D.G.Bulyginskiy: "Investigation of the Coefficient (1-R) in the Formula for Thermal Emission".
B.S.Kul'varskaya and G.V.Stepanov: "Emission Constants of the Oxides of Rare Earths". V.D.Sobolev: "Distribution of Current on the Surface of an Oxide Cathode in Ionic Devices".
N.G.Orshanskaya: "Progress in the Technology of the Preparation of Large Sponge Nickel-Oxide Cathodes".
L.A.Radchenko and V.S.Parkhomenko: "Ultrasonic Mixing of the Suspensions for the Electrophoretic Coating of Cathodes, Heaters and other components.

Card 1/2

SOV/109-3-8-4/18

AUTHORS: Kul'varskaya, B.S., Marchenko, V.B. and Stepanov, G.V.

TITLE: Emission Characteristics of the Oxides of Rare-earth Metals (Emissionnyye svoystva okislov redkozemel'nykh metallov)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 8, pp 1005 - 1009 (USSR)

ABSTRACT: The paper gives some experimental data on thermionic and secondary electron emission of various rare-earth oxides. The investigations were carried out on thin layers of rare-earth oxides having a thickness of about several thousand Å. The layers were obtained in a special device by evaporating the oxide from a tungsten vessel. The following characteristics were measured: the dependence of the secondary electron emission coefficient σ on the velocity of the primary electrons U_p, collector potential U_c and the incidence angle of the primary electrons φ. The results are shown in Figures 1 and 2 and in Table 1. Figure 1 shows $\sigma = f(U_p)$ for: 1) holmium oxide; 2) samarium oxide; 3) gadolinium oxide and 4) lutecium oxide. Figure 2

Card 1/3

represents $\sigma = f(U_p)$ for ytterbium oxide for various angles of incidence. The table shows the maximum secondary emission coefficient; this is found to vary from 1.7 to 2.83. The thermal emission characteristics of the oxides were studied on the basis of the Richardson curves. The measurements were carried out in a special, experimental diode, fitted with a directly heated tungsten cathode. The anode system consisted of three coaxial cylinders, the middle cylinder being the actual anode. The Richardson emission constants A and the work function φ were determined for the oxides of the following metals: Yt, La, Pr, Ne, Sm, Eu, Gd, Tb, Dy, Ho, Er, Yb, Lu and Th. These are shown in Table 2 (p 1007). Some of the Richardson curves are given in Figure 3. From the investigation, it is concluded that a number of rare-earth oxides, in particular, those of yttrium can be used successfully as emissive material in the cathodes where thorium oxides have been employed.

KUL'VARSKAYA, B.S.

SOV/109-3-8-17/18

AUTHORS: Alekseyeva, A.P., Basalayeva, N.Ya., Yelinson, M.I., Zernov, D.V., Kul'varskaya, B.S., Lifshits, T.M., Savitskaya, Ya.S., Sena, L.A., Shabel'nikova, A.E. and Yurasova, V.Ye.

TITLE: The Eighth All-Union Conference on Cathode Electronics (8-ye vsesoyuznoye soveshchaniye po katodnoy elektronike)

PERIODICAL: Radiotekhnika i Elektronika, 1958, vol 3, Nr 8, pp 1092 - 1103 (USSR)

ABSTRACT: The conference took place during October 17 - 24, 1957 in Leningrad at the Fiziko-tekhnicheskiy institut AN SSSR (Physics-engineering Institute of the Ac.Sc.USSR). It was organised by the Soviet Ac.Sc. and was attended by Soviet scientists from Moscow, Leningrad, Kiyev and other towns of the Soviet Union as well as by delegates from Hungary, Czechoslovakia and Romania. Altogether, over one hundred lectures were delivered at the conference. These were divided into the following sections: thermionic emission and the technology of thermionic cathodes; secondary electron emission; photo-electron emission; field electron emission; cathode conductivity phenomena; ionic processes and gas discharges. Some of the papers

Card1/2

The Eighth All-Union Conference on Cathode Electronics

read at the conference are published in the present issue of the journal: in fact, all the papers in this issue were read at the conference. Some of the papers were published in an earlier issue of the journal (Vol 2, Nr 12, 1957). A number of papers from the conference are being published in "Izvestiya AN SSSR, Ser. Fiz" Nrs 4 and 5 and also in various other journals. The present report gives brief summaries of a large number of the papers presented at the conference.

SUBMITTED: February 4, 1958

Card 2/2 1. Cathodes (Electron tube) 2. Thermionic emission 3. Secondary emission 4. Photoemission 5. Field emission

KUL'VARSKAYA, B.S.; MASLOVSKAYA, R.S.; TRIGUBENKO, V.A.

Interinstitutional seminar on cathode electronics; ninth session. Radiotekh. i elektron. 3 no.8:1103-1104 Ag '58. (MIRA 11:9)
(Electron emission) (Cathodes)

26.2531 26.2312
9,3120 (1003, 1137, 1140)

S/109/60/005/008/009/024
E032/E514

AUTHORS: Kul'varskaya, B.S. and Maslovskaya, R.S.

TITLE: Thermionic Emission and Vapour Pressure of the Oxides of Rare-Earth Metals

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.8, pp.1254-1260

TEXT: The thermionic emission was measured using the apparatus described by the first of the present authors et al. in Ref.6. The specimens under investigation (20 μ thick) were deposited on tungsten wires. A cylindrical tantalum anode was used in each case and the temperature of the tungsten wire was measured by determining its resistance (with corrections for end effects). The cathodes were activated after a vacuum of about 2×10^{-7} mm Hg had been reached. Since the anodes were not cooled, the thermionic emission could not be measured at temperatures in excess of 1500°C. The results obtained are summarised in Table 1. A study was also made of the effect of the wire material on which the oxides were deposited on the thermionic emission. It was found that at 1400°C the volt/amp characteristics for Mo, Ta and W were roughly the same.

Card 1/4

S/109/60/005/008/009/024
E032/E514

Thermionic Emission and Vapour Pressure of the Oxides of Rare-Earth Metals

The vapour pressures of the rare-earth metals were measured using the Knudsen molecular effusion method, and the results were represented in the form of the usual formula lg p = -(B/T) + A. The results obtained are summarised in Table 2. The last column in this table gives the heats of evaporation. Acknowledgments are made to B. M. Tsarev for his interest and advice. There are 4 figures, 2 tables and 10 references: 2 Soviet and 8 non-Soviet.

SUBMITTED: December 21, 1959

Card 2/2

S/109/60/005/008/009/024
E032/E514

Thermionic Emission and Vapour Pressure of the Oxides of Rare-Earth Metals

Table 1

Oxide of	Activation temperature, °C		1000	1100	1200	1300	1400	1500	1600
Lanthanum	Окись лантана	1300—1350	$3\cdot10^{-3}$	$1,7\cdot10^{-1}$	$[2,4\cdot10^{-1}]$	$[4,5\cdot10^{-1}]$	[0,8—1,0]	[2]	—
Praseodymium	Окись празеодима	1400—1500	—	$1\cdot10^{-3}$	$1\cdot10^{-2}$	$[2\cdot10^{-1}]$	—	[1,6]	—
Neodymium	Окись неодима	1400—1500	—	—	$2\cdot10^{-2}$	$7\cdot10^{-2}$	$1\cdot10^{-1}$	$3\cdot10^{-1}$	[2]
Samarium	Окись самария	1750—1850	—	—	—	$1\cdot10^{-3}$	$4\cdot10^{-3}$	$1\cdot10^{-2}$	$4\cdot10^{-2}$
Europium	Окись европия	1450—1550	—	—	$1\cdot10^{-2}$	$2\cdot10^{-2}$	$7\cdot10^{-2}$	$6\cdot10^{-2}$	—
Gadolinium	Окись гадолиния	1450	$1\cdot10^{-2}$	$5\cdot10^{-2}$	$1\cdot10^{-1}$	$4\cdot10^{-1}$	—	[0,6]	[1,0]
Terbium	Окись тербия	1550	$3\cdot10^{-3}$	$1\cdot10^{-2}$	$7\cdot10^{-2}$	$3\cdot10^{-1}$	—	[1,0]	—
Dysprosium	Окись диспрозия	1450—1550	—	$5\cdot10^{-3}$	$3\cdot10^{-2}$	$1\cdot10^{-1}$	$3\cdot10^{-1}$	—	—
Holmium	Окись гольмия	1800—1000	—	—	$2\cdot10^{-2}$	$5\cdot10^{-2}$	$1,5\cdot10^{-2}$	$4\cdot10^{-2}$	$1\cdot10^{-1}$
Erbium	Окись эрбия	1750—1850	$6\cdot10^{-3}$	$1\cdot10^{-2}$	$9\cdot10^{-2}$	$3\cdot10^{-1}$	—	—	—
Ytterbium	Окись иттербия	1450	—	$0,8\cdot10^{-3}$	$4\cdot10^{-3}$	$1,4\cdot10^{-2}$	—	—	—
Lutecium	Окись лютеция	1550—1650	$1\cdot10^{-2}$	$2\cdot10^{-1}$	$5\cdot10^{-1}$	—	—	—	—

Card 3/4

S/109/60/005/008/009/024
E032/E514

Thermionic Emission and Vapour Pressure of the Oxides of Rare-Earth Metals

Table 2

Oxide of	Temperature interval, °K	A	-B	ΔH_{oev} kcal/mole
Lanthanum				
Cerium				
Praseodymium				
Neodymium				
Samarium				
Europium				
Gadolinium				
Dysprosium				
Holmium				
Erbium				
Ytterbium				
Lutecium				

Значения A, B и $\Delta H_{0\,исп}$ для окислов редкоземельных металлов

Вид окисла	Пределы температур при измерениях, °К	A	$-B$	$\Delta H_{0\,исп}$, ккал/моль
Окись лантана	1980—2220	4,38	20150	92,1
Окись церия	2050—2320	4,65	20240	92,5
Окись празеодима	2060—2400	5,44	23700	108,3
Окись неодима	2080—2670	5,56	24000	109,5
Окись самария	2120—2350	5,75	23900	109,3
Окись европия	2030—2300	7,56	25600	117,0
Окись гадолиния	2080—2380	5,65	24700	113,3
Окись диспрозия	2260—2460	16,41	51500	235,6
Окись гольмия	2230—2490	9,7	35500	162,2
Окись эрбия	2270—2490	8,42	33050	151,4
Окись иттербия	2060—2400	7,53	27500	125,8
Окись лютеция	2120—2400	15,42	47050	215,3

Card 4/4

S/109/60/005/012/035/035
E192/E382

AUTHORS: Vikhlyayeva, R.P., Kul'varskaya, B.S., Shabel'nikova, A.E. and Yasnopol'skaya, A.A.

TITLE: Interdepartmental Seminar on Cathode Electronics (16th Session)

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol. 5, No. 12, pp. 2074 - 2075

TEXT: The Sixteenth Interdepartmental Seminar on Cathode Electronics took place on June 6, 1960.
Five papers were read:
"Investigation of the Influence of the Adsorption of Gases and Their Mixtures on the Work Function of Semiconductors" was discussed in a paper by E.Kh. Yenikeyev et al. This paper gave the results of the measurement of the work function in Ge, CuO, NiS, MnO_2 and other materials in the presence of various adsorbed gases and vapours (O_2, H_2, H_2O, etc.).

A.V. Druzhinin reported on the influence of the contact fields of the spots on the current taken from the cathode operating

Card 1/3

S/109/60/005/012/035/035
E192/E382

Interdepartmental Seminar on Cathode Electronics
(16th Session)

in the space-charge regime. On the basis of his experimental data the author showed that the main factor leading to an increase in the perveance of a diode with a pressed cathode is the increase in the intensity of the activated barium stream.
The third paper was read by P.V. Timofeyev and R.M.Aranovich. They reported the results of their investigation of a cold cathode made of magnesium oxide. They constructed electron tubes with magnesium-oxide cathodes (on a nickel base) coated with a layer of porous magnesium oxide having a thickness of 50 μ. These tubes could operate in various amplifying devices and could give an anode current up to 10 mA. The useful life of these tubes is more than 10 000 hours. The authors also demonstrated such a tube in a low-frequency amplifier.

Card 2/3

S/109/60/005/012/035/035
E192/E382

Interdepartmental Seminar on Cathode Electronics
(16th Session)

In the paper "Secondary-emission Characteristics of Antimony Sulphide and its Analogues" by V.L. Makedonskiy, it was shown that the secondary emission coefficient of the layers of Sb_2S_3, Sb_2Se_3 and Sb_2Te_3 does not exceed 1.3.

A paper by V.A. Grodko et al entitled "Influence of the Difference of the Work Functions of the Electrodes of a Thermionic Converter on Its Output Parameters" presented the results of a theoretical analysis of the dependence of the output power and efficiency of a converter on the difference between the work functions of the anode and cathode (the above paper is published in the present issue of the journal).

Card 3/3

BALASHOVA, A.P.; GOR'KOV, V.A.; ZHDAN, A.G.; KUL'VARSKAYA, B.S.; PARILIS, E.S.; POLYAKOVA, M.A.; YURASOVA, V.Ye.; YASNOPOL'SKIY, N.L.

Tenth Congress on Cathode Electronics. Radiotekh. i elektron 7 no.7:1258-1272 '62. (MIRA 15:6)
(Electronics—Congresses)

KUL'VARSKAYA, B. S.

AID Nr. 979-10 29 May

THERMOELECTRIC EMISSION PROPERTIES OF Zr-C-UC SOLID SOLUTION SYSTEMS (USSR)

Kul'varskaya, B. S., V. A. Grodko, B. N. Markar'yan, and I. M Rubanovich.
Radiotekhnika i elektronika, v. 8, no. 4, Apr 1963, 675-679
S/109/63/008/004/018/030

The device used in the investigation was a diode with the cathode stamped from a tantalum strip in a shape permitting temperature compensation. The specimens were cemented to the working area of the cathode (0.10 cm^2) in thicknesses of 80 μ. After vacuum processing, the specimens were detached in a vacuum of the order of 10^{-7} mm Hg, and measurements were made. The results were plotted along Schottky curves, from which the densities of the saturation current were determined. At 120 amp/cm^2 degree, the value of emission C (T) was calculated by the Richardson-Dushman equation, and the

Card 1/2

AID Nr. 979-10 29 May

THERMOELECTRIC EMISSION PROPERTIES [Cont'd] S/109/63/008/004/018/030

temperature coefficient was determined. It was found that all the investigated compounds of the system possess a rather high emitting capacity, substantially exceeding the thermoelectric emission of pure refractory metals. Compounds of the system from UC to $(ZrC)_{0.8}$– $(UC)_{0.2}$ inclusive have the highest thermoelectric emission rate. The $ZrC_{0.8} - UC_{0.2}$ compound is considered the best emitter of the whole system. Stable emission from the cathodes of the investigated system are obtained only after adequate aging at 2000°K. [DW]

Card 2/2

ACC NR: AP7000789 SOURCE CODE: UR/0089/66/021/005/0368/0375

AUTHOR: Kul'varskaya, B. S.

ORG: none

TITLE: Investigation of the rates of evaporation of cathodes made of uranium and zirconium carbides and their solid solutions

SOURCE: Atomnaya energiya, v. 21, no. 5, 1966, 368-375

TOPIC TAGS: uranium compound, carbide, zirconium carbide, electrode, evaporation, electric arc, thermionic energy conversion

ABSTRACT: In view of the great interest in the use of ZrC and UC and their solid solutions for electrodes in converters of heat power into electricity, the author has measured the rate of evaporation of these substances, using a method different from those previously published in the literature, in that it combines the Langmuir method in conjunction with the Becker method. The apparatus used for the tests was similar to that described by K. S. Beynar and B. P. Nikonov (Radiotekhnika i elektronika v. 10, 476, 1965). The ZrC was investigated at temperatures 2000 - 2300K and the UC at temperatures 1700 - 1900K. The oxides were evaporated from tantalum and rhenium substrates. The test procedure is described in detail. The rates of evaporation of ZrC cathodes ranged from ~2 x 10^{-9} to ~26 x 10^{-9} g-cm^{-2} sec^{-1} for ZrC, from ~9 x 10^{-9} to ~4 x 10^{-8} g-cm^{-2} sec^{-1} for UC, and from ~4 x 10^{-9} to ~4 x 10^{-8} g-cm^{-2} sec^{-1} for a $(ZrC)_{0.7}(UC)_{0.3}$ solid solution. The rate of evaporation of the carbide

Card 1/2 UDC: 621.362: 621.039.542.344

ACC NR: AP7000789

cathode was found to be dependent on the substrate used, being higher for a tantalum substrate than for a rhenium substrate. The results are compared with those obtained by others and reasons for the discrepancies are discussed. Orig. art. has: 9 figures, 1 formula, and 1 table.

SUB CODE: 20/ SUBM DATE: 26Aug65/ ORIG REF: 008/ OTH REF: 014

Card 2/2

KUL'VETSAS, L. (Vil'nyus)

Widely spread mistake in academic literature on physics. Fiz. v shkole 22 no.2:89-90 Mr-Ap '62. (MIRA 15:11)
(Physics--Study and teaching)

ZALEVSKIY, N.I.; KULIKOVA, A.N.; KUL'VINOVA, L.A.; SHISHMAREVA, O.Ya.; YAKOVLEVA, M.V.

Porous structure and physicochemical properties of natural scrbents of some deposits of Far East. Trudy DVFAN SSSR. Ser.khim. no.7:26-30 '65. (MIRA 18:12)

KUL'VINSKAYA N. A.; RAZUVAYEV G. A.; PUSTOV M. A.; and ZAYCHENKO T. N.

Reactions of Tetraphenyl Lead and Tetraphenyl Tin With Chlorides of Metals Which Do Not Form Stable Organo Metallic Compounds, Page 1514, Sbornik statey po obshchey khimii (Collection of Papers on General Chemistry), Vol II, Moscow-Leningrad, 1953, pages 1680-1686.

Gor'kiy State U

KUL'VINSKIY, Lev Vasil'yevich; KRAYZEL'MAN, S.M., red.; SVYATITSKAYA, K.P., vedushchiy red.; POLOSINA, A.S., tekhn. red.

[Pipe insulating machines and bitumen-melting units] Truboizoliatsionnye mashiny i bitumoplavil'nye ustanovki. Moskva, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 87 p. (MIRA 14:6)
(Bituminous materials) (Pipe)

-07-58-7-3/43

AUTHOR: Kul'vits, P. Deputy-chairman of the Lithuanian SSR Sovnarkhoz

TITLE: Radio Amateurs Must Make Their Contribution (Radiolyubiteli dolzhny vnesti svoy vklad)

PERIODICAL: Radio, 1958, Nr 7, pp 6-7 (USSR)

ABSTRACT: As part of the automation-of-industry drive, the newly formed Nauchno-issledovatel'skiy institut elektrografii (Research Institute for Electro-graphy) in Vilnyus is studying and designing various apparatus for high-speed electrocopying and reproducing. One such piece of apparatus can copy 20-30 m of blueprint or plan per minute (compared with 6-7 m per minute with the presently used apparatus). An experimental industrial prototype is planned of a machine for coating paper with a semi-conductor layer, based on work already done by the Institute. The paper can replace normal photographic paper. The Institute has also devised a method of recording images on tape, useful for transmitting newstype matrices from a central office along lines of communication to branch offices throughout the country. The Lithuanian

Card 1/2

Radio Amateurs Must Make Their Contribution 107-58-7-3/43

SSR Sovnarkhoz in cooperation with the Lithuanian DOSAAF organization, is arranging a competition for radio amateurs. Radio construction enthusiasts in transport and communications enterprises will invent various types of electronic radio apparatus and introduce it into the production process. The apparatus will then be judged and prizes awarded.

1. Blueprints--Copying--Equipment 2. Recording paper--Coatings
3. Semiconductor coatings--Applications 4. Images--Tape recording
5. Radio equipment--Development

Card 2/2

KULWIEC, M.

"Most Appropriate Methods of Irrigation under Our Conditions." p. 102, (GOSPODARKA WODNA, Vol. 13, No. 3, Mar. 1953. Warszawa, Poland.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

KULWIEC, E.

"Organization and Authority of Water Resources Service in Soviet Agriculture." p. 61 (GOSPODARKA WODNA, Vol. 13, No. 5, May 1953) Warszawa

SO: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 10, October 1953. Unclassified.

KLARNER, Stanislaw; KULWIEC, Marian; MAKOWSKA, Halina

Resistance of some varieties of dark tobacco types to the black root-rot disease (Thielaviopsis basicola Ferr.) in field tests. Rocz nauk roln rosl 88 no.1:143-158 '63.

1. Centralne Laboratorium Przemyslu Tytoniowego, Warszawa.

KULYA, A., inzh.; PROSKURIN, I., dotsent

Modernizing flour mills and increasing the output of state grain mills in the Moldavian S.S.R. Muk.-elev.prom. 25 no.12:19-20 D '59. (MIRA 13:4)

1. Tekhnicheskiy otdel Moldavskogo sovnarkhoza (for Kulya).
2. Kishinevskiy gosudarstvennyy universitet (for Proskurin).
(Moldavia--Grain milling)

PROSKURIN, I.G., kand.ekon.nauk; KULYA, A.I.

Oil industry of the Moldavian S.S.R. in the seven-year plan. Masl.-zhir.prom. 26 no.2:1-3 F '60. (MIRA 13:5)

1. Kishinevskiy gosudarstvennyy universitet.
(Moldavia--Oil industries)

KULYA, V.I.

Developing a unit equipped with junction triodes for the formation of pulses for cathode-ray curve tracers. Poluprov.prib. i ikh prim. no.3:110-115 '58. (MIRA 12:4)
(Oscillography) (Transistors)

BULYE, V. I.

PHASE I BOOK EXPLOITATION SOV/4034

Poluprovodnikovyye pribory i ikh primeneniye; sbornik statey, vyp. 4. (Semiconductor Devices and Their Application; Collection of Articles, No. 4) Moscow, Izd-vo "Sovetskoye radio," 1960. 421 p. Errata slip inserted. No. of copies printed not given.

Ed. (Title page): Ya. A. Fedotov; Ed. (Inside book): I. M. Volkova; Tech. Ed.: A. A. Sveshnikov; Editorial Board: Ya. A. Fedotov (Resp. Ed.), N. A. Barkanov, I. G. Bergel'son, A. M. Broyde, Ye. I. Gal'perin (Deputy Resp. Ed.), Yu. A. Kamenetskiy, S. F. Kausov, A. V. Krasilov, A. A. Kulikovskiy, I. F. Nikolayevskiy, N. A. Penin, and I. P. Stepanenko.

PURPOSE: This collection of articles is for technicians and scientists working in the field of semiconductors.

COVERAGE: These articles cover the following problems: physical processes occurring in semiconductor diodes and transistors; transistor parameters, and methods and instruments for measuring them; special features of transistor operation in amplifying and oscillating circuits; and circuits and systems utilizing transistors. Several articles mention personalities. References accompany most articles.

AVAILABLE: Library of Congress

34261
S/142/61/004/005/005/014
E140/E135

9,2586

AUTHOR: Kulya, V.I.

TITLE: Junction transistor relaxation oscillator with stiff transformer feedback

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v.4, no.5, 1961, 574-579

TEXT: The author considers the circuit shown in Fig.1. This circuit differs from a blocking oscillator in that there is no RC timing network in the control electrode circuit. The polarity of the narrow pulse at the transistor collector is opposite to that of the blocking oscillator. The operating cycle of the circuit is indicated in Fig.2, where M is some arbitrary starting point. The corresponding collector current (a), emitter voltage (b) and collector voltage (c) wave-forms are given in Fig.3. The author derives design equations for the circuit which were tested experimentally. The calculated and experimental results agreed generally to within 10%.
There are 6 figures, 1 table and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc. The English language reference reads:

Card 1/# 2

34261

Junction transistor relaxation ... S/142/61/004/005/005/014
E140/E135

Ref. 1: L.H. Light, P.M. Hooker, Transistor DC convertor. PIEE, v.102, no.6, 1955, 775.

ASSOCIATION: Kafedra radiotekhniki Odesskogo elektrotekhnicheskogo instituta svyazi
(Department of Radioengineering, Odessa Electrotechnical Communications Institute)

SUBMITTED: To NDVSh, November 5, 1959.
To Izv. vuz Radiotekhnika, February 4 1960 initially, and after revision, November 16, 1960.

Card 2/2

36951

S/142/61/004/006/017/017
E192/E382

6.9500

AUTHOR: Kulya, V.I.

TITLE: Noise-immunity and channel capacity of phase-pulse modulated five-sign code

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 4, no. 6, 1961, 751 - 733

TEXT: The phase-pulse modulated code is obtained from the usual five-sign code by transmitting pulse-messages during one-half of the cycle and spaces during the second half of the cycle; this is illustrated in Fig. 1, where a shows the usual five-sign code and б illustrates the PPM code. All the combinations of the PPM code form part of the combinations of the uniform ten-sign binary code. Since the code is non-self-correcting, it is interesting to investigate the distortion errors in it. A single distortion occurs if one elementary message of the ten-sign code is distorted. It is shown that the probability of printing the erroneous information is expressed by:

Card 1/4

Noise-immunity and ....

$$p_{\text{иск}}\left(\frac{\alpha}{\sqrt{2}}\right) \approx 5p^2\left(\frac{\alpha}{\sqrt{2}}\right) q^s\left(\frac{\alpha}{\sqrt{2}}\right) \qquad (4)$$

where $\alpha = u_o \sqrt{\tau} / \sigma\sqrt{2}$, where u_o is the amplitude,
σ is the root mean square value of noise, and
τ is the duration of a single pulse;

$p(\alpha) = \frac{1}{2} - \frac{1}{\sqrt{2\pi}} \int_0^{\alpha} e^{-\frac{z^2}{2}}\, dz$ is the probability of the distortion

of a single pulse when the noise fluctuation is $q(\alpha)$ (Ref. 2 V.A. Kotel'nikov - Theory of potential noise immunity in the

Noise-immunity and ....

presence of fluctuation noise (Teoriya potentsial'noy pomekhoustoychivosti pri flyuktuatsionnykh pomekhakh), Doctor's Dissertation, MEI, 1946). It is also shown that if the channel capacity of a five-sign code is assumed as being unity, the channel capacity of a self-correcting system is expressed by:

$$C = \frac{1}{1 + 3\left[1 - 5p^2\left(\frac{\alpha}{\sqrt{2}}\right) q^8\left(\frac{\alpha}{\sqrt{2}}\right) - q^{10}\left(\frac{\alpha}{\sqrt{2}}\right)\right]} \quad (5).$$

On the basis of the above formulae, it is found that the PPM code with automatic correction has a lower noise immunity than the twelve-sign self-correcting code. The channel capacity of the code is roughly three times lower than that of the normal five-sign code. There are 3 figures

Card 3/4

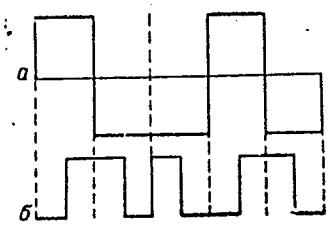
S/142/61/004/006/017/017
E192/E382

Noise-immunity and ....

ASSOCIATION: Kafedra teoreticheskikh osnov radiotekhniki Odesskogo elektrotekhnicheskogo instituta svyazi (Department of Theoretical Principles of Radio-engineering of Odessa Electrotechnical Telecommunications Institute)

SUBMITTED: July 30, 1961

Fig. 1:



Card 4/4

38974

S/106/62/000/007/004/005
A055/A101

6 9500

AUTHOR: Kulya, V.I.

TITLE: Applying Laguerre functions to the parametrical coding of speech signals

PERIODICAL: Elektrosvyaz', no. 7, 1962, 33 - 39

TEXT: The author investigates the possibility of constructing the speech spectrum compression system on the basis of the transmission of a limited number of the "signal-parameters" of the modulus of the instantaneous spectrum

$$\left| S_r(\omega, t) \right| = \left| \int_{-\infty}^{t} r(\tau - t) f(\tau) e^{-i\omega\tau} d\tau \right|, \quad (1)$$

[$r(\tau)$ being a certain weighting function of the integration], proportional to the coefficients of the expansion of the instantaneous autocorrelation function of the speech signal $f(t)$ into a series by the Laguerre functions. The utilization of the Laguerre functions enables the author to use analyzers and synthesizers of the synthetic telephony channel, containing only RC-elements; the use of cumbrous

Card 1/02

Applying Laguerre....

analyzers containing 1-f LC-delay lines is thus avoided. The analyzer used by the author is shown in fig. 3, where a, b and c correspond to the RC-circuits a), b) and c) of fig. 2; $Mult_0$, $Mult_1$.... $Mult_\gamma$ are voltage multipliers; ϕ_0, ϕ_1....ϕ_γ are four-poles whose "pulse responses" coincide with r (τ). The salient feature of the described method is a nonuniform precision (nonuniform over the frequency scale) of the approximation of the instantaneous spectrum envelope. The precision of the approximation is higher in the 1-f region, whereas it decreases at higher frequencies, which is in agreement with the peculiarities of the auditory perception. At the end of the article, the author expresses his thanks to A.Yu. Lev. The Soviet personalities mentioned in the article are: M.A. Sapozhkov, A.A. Pirogov, V.Ye. Murav'yev, V.G. Velichko and A.M. Polykovskiy. There are 5 figures.

4

SUBMITTED: January 2, 1962

Card 2/2

33789

S/108/62/017/002/004/010
D201/D305

9,2550
6,9400

AUTHOR: Kulya, V.I., Member of the Society (see Association)

TITLE: Pre-distortion and filtering in a channel with varying parameters

PERIODICAL: Radiotekhnika, v. 17, no. 2, 1962, 24 - 30

TEXT: The author considers problems related to setting and solving problems of determining the optimum linear operations on a signal when transmitted over a channel the system function of which $H(-i\omega, t)$ depends on time. The stationary random signal $\xi(t)$ is passed through a filter -pre-distorter with a transfer coefficient $F(-i\omega)$ and is transmitted through a varying parameter channel with the system function $H(-i\omega, t)$. At the receiving end the signal, together with the added stationary random interference $x(t)$ is passed through a linear filter with the transfer coefficient $\Phi(-i\omega)$ and applied to the load as $u(t)$. The problem of finding the best pair of filters $F(-i\omega)$ and $\Phi(-i\omega)$ may be determined as obtaining the minimum of the r.m.s. error

Card 1/4

Pre-distortion and filtering in ...

$$\varepsilon_T^2 = M/\xi(t - T) - u(t)/^2 . \qquad (1)$$

It is shown that for fast varying channel parameters the problem is basically that of determining an optimum linear filtering of a stationary random signal in the presence of noise. For simple filtering (without pre-distortion)

$$|\Phi(i\omega)| = \frac{|F(i\omega)|\,|H_0(i\omega)|\,f_\xi(\omega)}{\frac{1}{2\pi}\int_{-\infty}^{\infty} G(-i\lambda, -i\omega)\,|F(i\lambda)|^2 f_\xi(\lambda) e^{-i(\lambda-\omega)} d\lambda + f_x(\omega)} \qquad (16)$$

and

$$\varepsilon^2_{min} = \int_{-\infty}^{\infty} \frac{\frac{1}{2\pi}\int_{-\infty}^{\infty} G(-i\lambda, -i\omega)\,|F(-i\lambda)|^2 f_\xi(\lambda)\, e^{-i(\lambda-\omega)} d\lambda + |H_0(-i\omega)|^2 |F(-i\omega)|^2 \times}{\frac{1}{2\pi}\int_{-\infty}^{\infty} G(-i\lambda, -i\omega)\,|F(-i\lambda)|^2 f_\xi(\lambda)\, e^{-i(\lambda-\omega)} d\lambda + f_x(\omega)} \qquad (17)$$

$$\times f_\xi^2(\omega) + f_\xi(\omega) f_x(\omega)\, d\omega, \qquad (17)$$

are obtained, in which $G(-i\lambda, -i\omega)$ is the asymmetrical kernel of

Card 2/4

Pre-distortion and filtering in ...

/F(iω)/ obtained by the usual Lagrange method of multipliers and all f's denote the energy spectra of their respective subscripts. These two equations have a form similar to those which may be obtained for channels with constant parameters. The specific difference in calculations consists only in operations with a two-dimensional channel function G(-iλ, iω). This function must be known beforehand for any given problem. The full solution for the case of slowly varying parameters is obtained in the same manner. The obtained Eqs.

$$\left.\begin{aligned} |F(-i\omega)|^2 &= \frac{1}{G^2(i\omega)}\left[\frac{|H_0(-i\omega)|}{\sqrt{\lambda}}\sqrt{\frac{f_x(\omega)}{f_\xi(\omega)}} - \frac{f_x(\omega)}{f_\xi(\omega)}\right] \\ |\Phi(-i\omega)|^2 &= \frac{\lambda}{G^2(i\omega)}\left[\frac{|H_0(-i\omega)|}{\sqrt{\lambda}}\sqrt{\frac{f_\xi(\omega)}{f_x(\omega)}} - 1\right] \end{aligned}\right\}, \qquad (22)$$

where

$$\sqrt{\lambda} = \frac{\int_{-\infty}^{\infty} \frac{|H_0(-i\omega)|^2}{G^2(i\omega)} \sqrt{f_x(\omega) f_\xi(\omega)}\, d\omega}{A + \int_{-\infty}^{\infty} \frac{f_x(\omega)}{G^2(i\omega)}\, d\omega}. \qquad (23)$$

Card 3/4

and

$$\varepsilon^2_{\min} = \int_{-\infty}^{\infty} \frac{|F(-i\omega)|^2 [G^2(i\omega) + |H_0(-i\omega)|^2] f_r^2(\omega) + f_x(\omega) f_\xi(\omega)}{|F(-i\omega)|^2 G^2(i\omega) f_\xi(\omega) + f_x(\omega)} d\omega. \quad (24)$$

fully solve the problem of pre-distortion and filtering can be easily applied to the practical case of a two-path transmission channel with random delay. In this case $H(-i\omega, \xi) = 1 + e^{-i\omega\xi}/2$ and

$$G^2(i\omega) = 1 + \int_0^\infty \cos\omega\zeta\, dF(\zeta) = 1 + |\varphi(-i\omega)|.$$

There are 1 figure and 9 references: 6 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: J.P. Costas, PIRE, v. 40, no. 9, 1952; R.S. Berkowitz, PIRE v. 41, no. 4, 1953; L.A. Zadek, PIRE, v. 38, no. 11, 1950.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications imeni A.S. Popov) [Abstractor's note: Name of Association taken from first page of journal]
SUBMITTED: December 28, 1960 (initially)
March 28, 1961 (after revision

S/106/63/000/003/003/004
A055/A126

AUTHOR: Kulya, V.I.

TITLE: Investigation of the Chebyshev-type vocoder

PERIODICAL: Elektrosvyaz', no. 3, 1963, 22 - 30

TEXT: This is a continuation of the author's work "Applying Laguerre functions to the parametric coding of speech signals" (Elektrosvyaz', 1962, no. 7). The present article is a theoretical and experimental investigation of the Chebyshev variant of the vocoder (speech spectrum compression). Slow-variation signal-parameters proportional to the coefficients of the expansion of the synthesizer pulse response into a series according to orthogonal Laguerre functions are used for coding speech information. The principle of the analyzer is the following: if the envelope of the modulus of the instantaneous spectrum of the speech signal is $S(\omega, t)$, the pulse response of the synthesizer can be represented as:

$$g(\tau, t) = \frac{1}{\pi} \int_0^\infty S(\omega, t) \cos \omega\tau \, d\omega , \qquad (1)$$

Card 1/4

Investigation of the Chebyshev-type vocoder

and the signal-parameters proportional to the coefficients of its expansion into a series according to Laguerre functions on the right-hand semi-axis of time (τ) are:

$$a_\nu(t) = \int_0^\infty g(\tau, t)\, L_\nu(\tau)\, d\tau = \int_0^\infty S(\omega, t)\, \psi_\nu(\omega)\, d\omega\ ; \quad \tau \geqslant 0, \qquad (2)$$

where

$$L_\nu(\tau) = e^{\frac{\lambda\tau}{2}} \frac{d^{(\nu)}}{d\tau^\nu}\left(\frac{\tau^\nu}{\nu!}\, e^{-\lambda\tau}\right), \qquad (3)$$

are orthogonal Laguerre functions of the ν-th order ($\nu = 0, 1, 2, 3, \ldots$);

$$\psi_\nu(\omega) = \int_0^\infty L_\nu(\tau) \cos \omega\tau\, d\tau = \frac{T_{2\nu+1}\left(\sqrt{1 + \frac{4\omega^2}{\lambda^2}}^{-2}\right)}{\sqrt{1 + \frac{4\omega^2}{\lambda^2}}}\ ; \qquad (4)$$

$T_{2\nu+1}(x)$ are Chebyshev polynomials of the first kind and of the $(2\nu+1)$-th

Card 2/4

Investigation of the Chebyshev-type vocoder

order. In electric simulation, (2) can be approximated by:

$$a_\nu(t) \approx \sum_{k=1}^{m} S(\omega_k, t)\, \psi_\nu(\omega_k)\, \Delta\omega_k , \qquad (5)$$

where $S(\omega_k, t)$ are readings of the instantaneous spectrum envelope on the frequency axis for values $\omega = \omega_k$; m is the number of readings; $\Delta\omega_k = \omega_{k+1} - \omega_k$. Two variants of the experimental analyzer permitting to obtain (5) - variants with and without selective filters, respectively - are described and examined. The first variant permits the simulation of the initial relations with an error not exceeding 5%. The instantaneous pulse response of the synthesizer can have the following form:

$$g(t, \tau) = \sum_{\nu=0}^{7} a_\nu(t) \left[L_{m-\nu}(\tau) + L_{m+\nu+1}(\tau)\right]; \quad \tau \geqslant 0 \qquad (12)$$

on the right-hand time-axis. The synthesizer circuit and, in particular, the RC-section producing pulse responses in the form of Laguerre functions are described and examined. The principles underlying the choice of the optimum value of the parameter λ are discussed; the value $\lambda = 5.34\pi 10^3$ is selected. The

S/106/63/000/003/003/004
A055/A126

Investigation of the Chebyshev-type vocoder

results of some articulation tests are reproduced. These tests confirm the theoretical considerations on the advantages of a nonuniform precision (over the frequency scale) in the approximation of the envelope of the modulus of the instantaneous spectrum by means of Laguerre polynomials. The analyzer without filter, though less accurate, is advantageous owing to its simplicity. The Chebyshev-type vocoder permits microminiaturization of devices; all its elements can be constructed without using inductances. There are 10 figures and 2 tables.

SUBMITTED: October 10, 1962

Card 4/4

L 13835-63 EWT(1)/EWG(k)/FCC(w)/BDS/ES(v)/EEC-2 AFFTC/ASD/ESD-3/APGC
SSD Pz-4/Pe-4/Pi-4/Pl-4 PT-2/GW
ACCESSION NR: AP3000[illegible] S/0106/63/000/005/00[illegible]/0073

AUTHOR: Kulya, V. I.; Nudel'man, F. Ya.

TITLE: Selection of frequency band for intermittent radio communication

SOURCE: Elektrosvyaz', no. 5, 1963, 72-73

TOPIC TAGS: meteor-burst radiocommunication

ABSTRACT: Montgomery and Sugar (Proc. IRE, 1957, vol 45, No 12) investigated the rate of information transmission vs. frequency band for meteor-burst or other intermittent transmission. Their formula for the mean probability of error is considered inadequate and two new formulae are suggested (Enclosure, formulae 2 and 4 respectively). The former formula yields an overstated value of the mean probability of error. The latter formula shows that the traffic capacity is a decreasing function of frequency. Orig. art. has: 7 formulae.

ASSOCIATION: none

Card 1/1

KULYA, V.I. (Odessa)

Calculation of a resistive matrix network. Avtomatyka 8 no.3:73-75 '63. (MIRA 16:7)

(Electric networks)

ACCESSION NR: AP4029223 S/0106/64/000/004/0048/0060

AUTHOR: Kulya, V. I.

TITLE: Experimental investigation of correlations in the speech spectrum and comparison between some orthogonal vocoders [Report at the All-Union Conference on Coding Theory and Applications, Odessa, May 1963]

SOURCE: Elektrosvyaz', no. 4, 1964, 48-60

TOPIC TAGS: speech, speech spectrum, vocoder, orthogonal vocoder, speech spectrum correlation

ABSTRACT: On the basis of published sources, elements of the discretization-interpolation theory of speech transmission are discussed. The mean square error of the reproduction of instantaneous-spectrum readings when interpolation is made by arbitrary orthogonal functions is:

Card 1/3

ACCESSION NR: AP4029223

$$\varepsilon^2 = T\|R\| - \frac{\{T[\|B\| \cdot \|R\|]\}^2}{T[\|B\| \cdot \|R\| \cdot \|B\|]},$$

where T is the matrix trace; $\|B\| = \|\tilde{C}\| \cdot \|C\|$.

Correlations between the readings of the envelope of an instantaneous speech spectrum were determined on an electron simulator in the Laboratory of Computer Mathematics, Odessa State University. Signals from a 17-band spectrum analyzer were processed. It was found that vocoder-band signals are strongly cross-correlated: the correlation coefficient was never below 0.5 and often reached 0.86. To evaluate the efficiency of transmission of vocoder signal-parameters, eigenvectors and characteristic numbers of $\|R\|$ were determined on a computer. The effect of the number of vocoder coordinates upon the mean square error was computed for these vocoder types: (a) harmonic with mixed scanning, (b) harmonic with cosine scanning, and (c) Cheby*shev's with $\lambda = 5.34\mathcal{T} \times 10^3$. Speech-spectrum correlations were found fairly stable for

Card 2/3

ACCESSION NR: AP4029223

4 speakers (2 men, 2 women); the developed orthogonal functions satisfactorily approximated the spectrum; hence, 8 coordinates are considered sufficient for approximating the speech spectrum of any voice. The speech signal or filtered narrow bands of its spectrum cannot be considered as a normal random process. "The author is greatly indebted to A. Yu. Lev, A. A. Pirogov, and N. K. Ignat'yev for discussing the results. Computer work was done by N. T. Bozhchenko." Orig. art. has: 4 figures, 12 formulas, and 3 tables.

ASSOCIATION: Odesskiy gosudarstvenny*y universitet (Odessa State University)

SUBMITTED: 03Aug63 DATE ACQ: 28Apr64 ENCL: 00

SUB CODE: DP NO REF SOV: 006 OTHER: 001

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000927510017-9"

ACC NR: AT6022316 SOURCE CODE: UR/0000/66/000/000/0048/0054

AUTHOR: Kulya, V. I.

ORG: none

TITLE: Transmission of vocoder signals over small-capacity binary channels

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya provodnoy svyazi. Doklady. Moscow, 1966, 48-54

TOPIC TAGS: vocoder, telephone signal

ABSTRACT: The successful transmission of band-vocoder signals over a 1500-bit/sec channel (Aviation Week and Space Technology, 1960, v. 73, nos. 3-4) prompted the following experimental study which was intended to reduce the above channel capacity by using orthogonal vocoders. The speech signal was converted by a vocoder analyzer; 13 band filters operated within 300—3400 cps. A matrix network turned the spectrum instantaneous values into 8 signal parameters. W. Koenig's equal-articulation scale was selected (BLR, 1948, v. 27, no. 8). Block diagrams are shown. These results are reported: (1) With a fixed binary-channel capacity,

Card 1/2

the speech-intelligibility loss due to a lower quantization frequency can be compensated, to a certain degree, by increasing the number of binary digits representing the signal-parameter levels; however, at quantization frequencies under 40 cps, irreversible intelligibility impairments occur; (2) With a fixed speech intelligibility, the logarithmic quantization scale permits halving the binary-channel capacity as compared to that required by the uniform-level scale; (3) With a channel capacity under 1500 bits/sec, it is expedient to discard the 8th signal parameter, thus enhancing the transmission accuracy of the rest of the signal parameters; (4) A binary channel of 2500 bits/sec capacity ensures almost undistorted synthesized-speech transmission; a minimal channel capacity of 1000 bits/sec (no fundamental tone) is required to transmit speech with an intelligibility of 70%. "In conclusion, the author wishes to thank A. A. Pirogov for the problem statement, and A. S. Krys'ko, A. A. Luyk, V. P. Matveychuk, and V. S. Sidenko for their part in the experimental work." Orig. art. has: 3 figures, 4 formulas, and 1 table.

SUB CODE: 17, 09 / SUBM DATE: 31Mar66 / ORIG REF: 005 / OTH REF: 003

KULYANI', G. P.

17303

Lyesovoznyy avtomobil' s gazogeneratorom na chvyrlye. Lyes. prom-st', 1949, no 3, s. 13

SO: LETOPIS' NO. 40

F KULYABIN, G.F.

1038. ECONOMY IN WOOD FUEL FOR GAS PRODUCERS. Kulyabin, G.F. (Za Ekon. Topliva (Fuel Econ.), Aug. 1951, 15-17). A brief account, with tabulated performance figures, is given of the evolution of mobile gas producers in the U.S.S.R. Earlier types used wood blocks dried to 20% moisture. The latest use freshly cut logs half a metre long. Air-dried logs of this size are the most economical fuel. (L).

S/048/63/027/003/004/025
B104/B186

AUTHORS: Shuvayev, A. T., and Kulyabin, G. M.

TITLE: Effect of a change in valency of chromium on its K emission spectrum

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 27, no. 3, 1963, 322-323

TEXT: This paper was presented at the 6th Conference on X-ray Spectroscopy, Odessa, July 2 - 10, 1962. The K emission spectrum of chromium as a metal and in the compound Cr_2O_3 and K_2CrO_4 excited with a [illegible] were studied with a [illegible] spectrometer. [illegible] trivalent Cr_2O_3 to [illegible] lines of chromium shift to longer waves, the $K_{\beta_{1,3}}$ line shifts rapidly to shorter waves. This behavior is characteristic of the transition elements of the iron group. With increasing valency, the $K_{\beta_{1,3}}$

Card 1/2

Effect of a change in ...

satellite line shifts to shorter waves, and its intensity increases sharply. The width [illegible] with varying valency. [illegible] the [illegible] of lower valency, the [illegible] also that this is characteristic of the iron group transition elements. There are 1 figure and 2 tables.

ASSOCIATION: Rostovskiy-na-Donu gos. universitet (Rostov-na-Donu State University)

Card 2/2

USSR/Medicine - Heart, Disease Nov/Dec 1947
Medicine - Veins

"Microscopic Structure of Venae Cordis in Various Ages During Cardiopathy," Lt Col B. V. Kulyabko (Med), Leningrad, Chair of Pathol Anat, Mil Med Acad imeni Kirov, 9½ pp

"Arkhiv Patolog" No 6

Part two of a series on heart structure during cardiopathy. Data based on studies of 48 cases, various ages, including the seriously ill and those who died. Four of the venae cordis studied: 1) the v. cordis magna, 2) the v. cordis media, 3) the v. posterior ventriculi sunistri cordis, and 4) the v. cordis parva.

53764

USSR/Medicine - Heart Disease (Contd) Nov/Dec 1947

Submitted, 1 Nov 1947. Chief of Chair of Pathological Anatomy: Lt Gen N. N. Anichkov (Med), Academician, Mil, Med Acad imeni Kirov.

KULYABKO, B. V., LT COL

LC

53764

SUZDALEVA, V.V.; KULYABKO, O.M.

Determination of the lability of blood protein systems in anaphylactic shock. Probl.gemat. i perel. krovi 1 no.3:46-47 My-Je '56. (MLRA 10:1)

1. Iz TSentral'nogo ordena Lenina instituta gematologii i pereliva-niya krovi (dir. - chlen-korrespondent AMN SSSR prof. A.A.Bogdasarov) Ministerstva zdravookhraneniya SSSR.

(ALLERGY, exper.
anaphylactic shock, blood protein systems in, determ. of lability)
(BLOOD PROTEIN, in various dis.
exper. anaphylactic shock, lability determ. of blood protein systems)

KULYABKO, O.M.

Histamine content of blood in myeloid leukemia in children [with summary in English, p.63]. Probl.gemat. i perel.krovi. 3 no.3:21-24 My-Je '58 (MIRA 11:6)

1. Iz Instituta pediatrii AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof. O.D. Sokolova-Ponomareva).
(LEUKEMIA, MYELOCYTIC, in infant and child,
blood histamine (Rus))
(HISTAMINE, in blood,
in myelocytic leukemia in child. (Rus))

KULYABKO, O.M.

Blood mediators in the dynamics of the leukemic processes in children [with summary in English, p.61]. Probl.gemat. i perel. krovi 4 no.2:22-25 F '59. (MIRA 12:2)

1. Iz Instituta pediatrii AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof. O.D. Sokolova-Ponomareva).

(LEUKEMIA, in inf. & child,
blood mediators in (Rus))
(ACETYLCHOLINE, in blood,
in leukemia in child (Rus))
(SYMPATHINS, in blood,
same)
(CHOLINESTERASE, in blood
same)

KULYABKO, O.M.; DANILINA, Z.A.

Blood histamine content in purpura in children. Pediatriia 37 no.7:31-35 Jl '59. (MIRA 12:10)

1. Iz laboratorii patofiziologii (zav. - prof.N.M.Nikolayev) Instituta pediatrii AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof.O.D.Sokolova-Ponomareva) i kafedry detskikh bolezney (zav. - deystvitel'nyy chlen AMN SSSR prof.Yu.F.Dombrovskaya) I Moskovskogo meditsinskogo instituta imeni I.M.Sechenova.

(PURPURA, NONTHROMBOPENIC, in inf. & child, blood histamine (Rus))
(HISTAMINE, in blood, in nonthrombopenic purpura in child. (Rus))

KULYABKO, O. M., Cand Biol Sci (diss) -- "The biologically active blood components at various stages of the leukemia process in children". Moscow, 1960. 14 pp (Acad Med Sci USSR), 200 copies (KL, No 10, 1960, 128)

PUCHKOV, N.V.; KULYABKO, O.M.

Effect of blood serum from children with myeloid leukemia on the phagocytic reaction of leukocytes. Pat. fiziol. i eksp. terap. no.2: 82-83 '64. (MIRA 17:9)

1. Laboratoriya patofiziologii Instituta pediatrii (dir. - dotsent M.Ya. Studenikin) AMN SSSR, Moskva.

KULYABKO, O.V., kand.med. nauk; SEREDA, Ye.V., kand.med.nauk

Histaminopexy in healthy children and in those with primary tuberculosis. Pediatriia 4 no.7:11-17 Jl'63 (MIRA 16:12)

1. Iz tuberkuleznogo otdeleniya (zav. - prof. I.B.TSimbler) i patofiziologicheskoy laboratorii (zav. - prof. N.V.Puchkov) Instituta pediatrii (dir. - dotsent M.Ya. Studenikin) AMN SSSR.

KULYABKO, P.M.

Effect of thyroidectomy on the effectiveness of fattening hogs. Fiziol.zhur.[Ukr.] 9 no.1:132-133 Ja-F '63. (MIRA 18:5)

1. Laboratoriya biofiziki Instituta fiziologii im. Bogomol'tsa AN UkrSSR, Kiyev.

KULYABKO, P.N. [Kuliabko, P.M.]

Evaluation of the functional state of the thyroid gland of swine after local irradiation with X-rays. Fiziol. zhur. [Ukr.] 9 no.6:826-828 N-D '63. (MIRA 17:8)

1. Laboratoriya biofiziki Instituta fiziologii im. Bogomol'tsa AN UkrSSR, Kiyev.

KULYABKO, V. (Volzhskiy Volgogradskoy obl.); SAKHANOV, Yu., inzh. (Volzhskiy Volgogradskoy obl.); DODONOV, P., inzh. (Volzhskiy Volgogradskoy obl.); FARAFONOV, M. (Volzhskiy Volgogradskoy obl.)

Eight and a half kopeck per ton. Izobr.i rats. no.5 (201):35 '63. (MIRA 16:7)

(Cement--Transportation)

TSIRKIN, Yu.M.; KRASOVSKIY, F.V.; KULYABKO, V.V.

Use of the hemagglutination inhibition reaction in the diagnosis of tick-borne encephalitis and in the detection of the immunological structure of the population in pseudo-foci. Med. paraz. i paraz. bol. 32 no.5:567-572 S-O'63 (MIRA 16:12)

1. Iz otdela epidemiologii (zav. - prof. N.N.Dukhanina) Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye. I.Martsinovskogo (dir. - prof. P.G.Sergiyev) virusologicheskoy laboratorii Krasnoyarskoy krayevoy sanitarno-epidemiologicheskoy stantsii (zav. F.V.Krasovskiy) i parazitologicheskogo otdela Krasnoyarskoy gorodskoy sanitarno-epidemiologicheskoy stantsii (zav. V.V. Kulyabko).